A joint effort among decision-makers, physicians, society, pharmaceutical industry, and the Mexican scientific community in general would be useful for reducing the high costs of these diseases.

PIN15

THE EXPECTED ECONOMIC BURDEN OF METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS (MRSA) IN COMPLICATED SKIN AND SKIN STRUCTURE INFECTIONS (CSSSI)

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OBJECTIVES: To model the expected rate of clinical failure of initial empiric therapy and economic burden likely to be associated with the presence of MRSA in patients hospitalized with cSSSI in the United States. **METHODS:** Using published data on 1) the prevalence of MRSA and other bacterial pathogens in cSSSI; 2) the *in vitro* susceptibility rates of 5 commonly used antibiotic regimens in cSSSI in relation to the most pervasive pathogens identified above; and 3) estimated costs of failure of initial, empiric treatment of cSSSI from a recent study of a large US multi-hospital database, we developed a model to simulate the expected clinical and economic impact of MRSA. **RESULTS:** At a base case assumption of a 55% prevalence of *Staphylococcus aureus* pathogens in cSSSI, half of them being methicillin-resistant (MRSA = 27.5%), the model projected a clinical failure rate of 35.9% and weighted mean inpatient treatment costs of $5492. At an alternative assumption of zero prevalence of MRSA, the model projected a clinical failure rate of 18.4% and a weighted mean cost of $4869, yielding $623 ($5492 less $4869) as the incremental cost of methicillin resistance to the average patient hospitalized with cSSSI. This translated into an expected health care burden of approximately $500 million for the 800,000 patients hospitalized for cSSSI annually. Raising the market share of antibiotics with *in vitro* activity against MRSA from the current 20% to 50% would reduce the expected economic burden by $200 million; raising it to 100% would eliminate the burden altogether. **CONCLUSIONS:** Our model simulated the expected clinical failure rates and economic impact of use of initial empiric regimens for cSSSI with varying levels of coverage—as represented by *in vitro* activity—for MRSA, and how this expected economic impact may be offset with suitable change in mix of initial, empiric antibiotic therapy.

PIN16

CLOSTRIDIUM DIFFICILE-ASSOCIATED DIARRHEA (CDAD) IN ACUTE HOSPITALS: A PREVALENT COST ISSUE

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OBJECTIVES: Identify new CDAD cases, readmission rate and estimate cost over one year. **METHODS:** All CDAD cases were identified in Massachusetts discharge data using ICD-9-CM codes and patient identifiers. Index stays occurred from October 31, 2001–September 30, 2002. The new case cohort excluded patients with CDAD-related admissions in the previous year. For primary CDAD cases (principal diagnosis: CDAD), all stay costs (accommodations and ancillaries) were deemed related. For secondary CDAD cases, APR-DRG assignment, severity and length of stay (LOS) were used to calculate the incremental care costs due to CDAD. All charges were adjusted (cost-to-charge, inflation, geography) to reflect national costs (2005 US$). **RESULTS:** The 4015 new cases of CDAD identified reflect a prevalence of 1% among hospitalized patients. Almost all (93%) hospitals treated 1 case (range: 1–312). Of 1310 primary CDAD cases, 66% were female, with mean age of 72 years (±17.2), mean LOS of 6.9 days (median: 5) and mean cost of $10,260 (median: $5752) per stay. Secondary CDAD (2705 cases) was similar demographically but led to longer stays (mean: 15.7, median: 11 days); suffered higher ($p < 0.001$) inpatient case fatality rates (13% vs. 5%); and were more expensive than primary cases (mean: $32,352, median: $16,842). For secondary cases, CDAD-related costs comprised 40% ($12,999) of total mean cost. Over one year, 18% of index stay survivors were readmitted for CDAD, within 51 days on average (mean 1.3 readmissions per patient, range: 1–6). Total one-year inpatient cost for CDAD management was estimated at $56 million. **CONCLUSIONS:** CDAD has both clinical and economic consequences. It is widespread in hospitals, generates substantial care costs for those admitted for CDAD management, and increases inpatient costs dramatically when it occurs as a complication. Recurrent CDAD leads to re-hospitalization, typically within two months, further increasing the cost burden of CDAD.

PIN17

A COST-UTILITY ANALYSIS OF PEGINTERFERON ALFA-2A VERSUS PEGINTERFERON ALFA-2B AS THE INITIAL TREATMENT OF HEPATITIS C FROM THE PERSPECTIVE OF THE VETERANS AFFAIRS HEALTH CARE SYSYTEM

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OBJECTIVES: Although the prevalence of hepatitis C virus (HCV) infections is higher among the United States veterans than in the general population, a paucity of pharmacoeconomic research has been conducted from its perspective. This study compared the cost-utility of the current peginterferon regimens from the perspective of the Veterans Affairs (VA) health care system. **METHODS:** A Markov model for treatment-naïve chronic hepatitis C patients was developed to evaluate 1) peginterferon alfa-2a plus ribavirin (PEG 2a + R); 2) peginterferon alfa-2b plus ribavirin (PEG 2b + R); and 3) no therapy. Patient cohorts were 45 or 55 year-old males with liver fibrosis and without cirrhosis. Data for the model were obtained from clinical trials and published literature. All costs were based on VA costs and reflect 2005 U.S. dollars. The lifetime expected costs, quality-adjusted life years (QALYs) gained, and incremental net monetary benefit (INMB) with HCV treatments were determined. Ninety-five percent confidence intervals (CI) were generated from the Monte Carlo simulations. **RESULTS:** Both peginterferon regimens were significantly more cost-effective than no treatment, though no differences in costs or QALYs were noted between the two peginterferon regimens. For 45 year-old cohort with a genotype 1 infection, the INMB was $128,583 (95% CI $79,279 to $177,308) and $128,025 (95% CI $80,425 to $173,448) versus no treatment for PEG 2a + R and PEG 2b + R, respectively. Treatment with either peginterferon regimen produced significantly lower lifetime HCV-related medical costs for genotype 2 or 3 infections, but not genotype 1. **CONCLUSIONS:** PEG 2a + R and PEG 2b + R were found to be similar cost-effective treatments for patients with HCV infections, particularly with genotypes 2 and 3. However, no significant differences in costs or efficacy were observed between these treatment regimens.